CHEMICAL SENSES

Volume 14 1989

IRL PRESS
at
OXFORD UNIVERSITY PRESS
Oxford New York Tokyo

Author index

Ache,B.W. 637,817
Akai,M. 313
Akaishi,T. 327
Akers,R.P. 293
Albone,E.S. 175
Alcaraz,E. 195
Almaas,T.J. 196
Amakawa,T. 319
Andriason,I. 216,611
Angioy,A.M. 196,197,217
Aou,S. 313
Apfelbach,R. 182,197
Arnold,G. 197
Arnold,G.M. 195
Asaka,H. 305
Asanuma,N. 323
Astic,L. 195,198,224
Atema,J. 228,829

Bakchine,E. 220
Baker,T.C. 411
Barbarossa,I.T. 196,197, 203,217
Bartlett,P.N. 175
Beauchamp,G.K. 183
Belitz,H.-D. 175
Berglund,B. 183,198
Berglund,U. 183,198
Bertino,M. 183
Beynon,R.J. 203,204
Bigiani,A. 203
Bingham,A.F. 199
Birch,G.G. 199,209,214, 214,249
Bjostad,L.B. 383
Booth,W.D. 183
Borroni,P.F. 199
Bossert,W. 197
Bouvet,J.F. 200
Brand,J.G. 184,805,841
Breipohl,W. 649
Bruch,R.C. 176
Bryant,B.P. 184,805
Buonviso,N. 200
Burd,G.D. 200
Burger,B.V. 201,201
Buschmann,E. 205
Buswell,C.U. 121

Cain,W.S. 479
Calviño,A.M. 163
Caprio,J. 314,323
Carr,W.E.S. 176
Carter,J.N. 537
Carter,R. 621
Cattarelli,M. 195,217,577
Chaput,M.A. 200,202
Chastrette,M. 176
Christensen,T.A. 202,435
Clancy,A.N. 565
Clawson,L. 467
Cliff,M. 203
Clifford,M.N. 214
Cohen,L.B. 577
Cometto-Muñiz,J.E. 163
Coppola,D.M. 293
Coquand,J.P. 222
Corbett,A. 537
Costa,J. 187
Crnjar,R. 203,217
Cusack,M. 203,204

Daniel,P.C. 503
Davies,D. 204
De Graaf,C. 81
De Graat,C. 204
de Kramer,J.J. 205
Delaleu,J.C. 200
Delmas,M. 227
Den Otter,C.J. 185,205
Derby,C. 210
Derby,C.D. 503
DeSimone,J.A. 188
Desor,J.A. 793
Devos,M. 216
Dickinson,K. 205
Dickman,J.D. 231
Dijksterhuis,G.B. 205
Distel,H. 189,226
Dodd,G. 177,185,189, 206,212,221
Dodd,G.H. 205,222,223, 224,225,229
Douault,Ph. 220
Duchamp,A. 206
Duchamp-Viret,P. 206
Ducheny,K. 371

Edwards,D. 185
Edwards,P.A. 281
Elaagouby,A. 207
Ellila,M. 211
Endo,S. 306
Engelman,K. 183
Ennis,D.M. 467,597
Erickson,B.W. 137
Erickson,R.P. 193
Etcheto,M. 11
Etzweiler,F. 181
Evans,P. 223

Falkner,B. 673
Farbman,A.I. 185,210, 218,335
Farleigh,C.A. 186,194
Faurion,A. 186
Fine-Levy,J.B. 503
Finn,J. 793
Fonta,C. 187
Forward,R.B.,Jr 137
Frank,M. 209
Frank,M.E. 451,663
Frank,R.A. 103,371,621
Frijters,J.E.R. 81
Fujii,S. 305
Fujita,S. 306
Fukuda,H. 303
Fukuda,K. 317
Fukuda,M. 312
Fukushima,Y. 305
Funakoshi,M. 319

Gama,Y. 320
Ganchrow,D. 187,207
Ganchrow,J. 187
Ganchrow,J.R. 207
Ganzevles,P.G.J. 190
García-Medina,M.R. 163
Gardner,J.W. 177
Gascuel,J. 208
Gaset,A. 227
Gay,B. 195
Gelhard,B. 259
Gendrot,G. 224
Gerhardt,G.A. 829
Gervais,R. 192,207,219
Getchell,M.L. 188
Getchell,T.V. 188
Gill,J.M.,II 193
Girardot,M.-N. 210,503
Glaser,D. 75,211
Gleeson,R.A. 176
Godinot,F. 200
Goto,T. 305
Gotoh,M. 308
Gower,D.B. 188,208,209
Grant,A.J. 293,421
Green,B.G. 259
Gregson,R.A.M. 149
Grigor,J.M. 209

Halsell,C. 209

Hanai,K. 322
Hanamori,T. 314
Hansson,B.S. 188,411
Harada,S. 315
Håard af Segerstad,C. 335
Harder,D.B. 547
Harpaz,S. 210,805
Hasegawa,S. 305
Hatanaka,T. 322
Hatt,H. 178
Hayama,T. 314,323
Hayashi,K. 320
Heck,G.L. 188
Hedler,P. 195
Hellekant,G. 75,210, 211,218,335
Hellemann,U. 211
Hettinger,T.P. 663
Hext,P.M. 178
Hidaka,I. 317,317
Hildebrand,J.G. 178, 202,435
Hirakawa,T. 315
Hitotsuya,H. 325
Hladik,A. 75,211
Hladik,C.M. 75,211,225
Högman,L. 198
Holder,G. 209
Holland,K.T. 208
Holley,A. 200,212,219
Honda,E. 315
Hongjun,L. 211
Horio,T. 309
Hudson,R. 189,226
Huerta,M. 209
Hummel,T. 190
Huque,T. 184

Ichikawa,H. 313
Ichikawa,O. 326
Iida,T. 305,311
Ikeda,M. 306
Ikui,A. 306
Imai,Y. 313
Imoto,T. 325
Indo,M. 303,321
Inoki,R. 313
Ishigami,Y. 320
Ishii,R. 309
Ishikawa,S. 308
Ishiko,N. 314
Ito,M. 306
Iwahashi,H. 320

Jakinovich,W.,Jr 865
Janin,J.L. 197
Jenner,J. 189,212,225
Jian-Yong,W. 184
Jourdan,F. 193
Jurs,P.C. 281

Kaiser,L. 213
Kalinoski,D.L. 184
Kanamura,S. 303,305,311
Kanaya,S. 781
Kanisawa,T. 303
Kanno,Y. 605
Karadi,Z. 313
Kasahara,K. 324
Kasahara,Y. 314,315
Kashiwayanagi,M. 303
Katsuda,K. 309
Katsumi,H. 781
Kauer,J.S. 211
Kawada,T. 307,307,321
Kawamura,Y. 309
Kawasaki,Y. 320
Keil,T.A. 213,213
Kellard,B. 214
Kemp,S.E. 214,249
Kendal-Reed,M. 194,214
Kennedy,L.M. 379,853
Kikuchi,A. 304
Kimura,M. 309
Kimura,S. 306,307
King,B.M. 215
Kitada,Y. 317,487
Kitamura,R. 321
Kiyohara,S. 314,317
Kiyomitsu,Y. 321
Kiyota,S. 303
Klemm,W.R. 273
Kobal,G. 190
Kodama,M. 306
Koeppe,G.M. 195
Kohbara,J. 317
Koizuka,I. 311,311
Komai,M. 306
Koster,E.P. 215
Kotake,Y. 308
Kraevskaya,M.A. 229
Kroeze,J.H.A. 190
Kudoh,M. 322
Kuiper,H.J. 215
Kumamoto,N. 315
Kumazawa,T. 316
Kurahashi,T. 323
Kurihara,K. 316,316, 324,325
Kurihara,Y. 319,325
Kurioka,Y. 305
Kurtcan,U. 215

Kwasniewska,I. 228

Laffort,P. 11,216
Laing,D.G. 537
LaMorte,V.J. 184
Lampis,G. 217
Lancet,D. 226
Larson,G. 75,211
Lawless,H.T. 349
Le Metayer,M. 220
Le Pendu,J. 198
Le Querre,J.L. 227
Lee,J.-K. 216,226
Legger,A. 204
Lehtovaara,A. 228
Lenard,L. 313
Leveteau,J. 216,611
Lewitt,M.S. 537
Linn,C.E.,Jr 379,393
Liscia,A. 196,197,217
Litaudon,P. 217
Löfqvist,J. 411
Löfstedt,C. 188,411
Loveren,G.V. 303
Ludvigson,H.W. 525
Lush,I.E. 190

MacLeod,P. 222,611
Macrides,F. 565
Maeda,S. 315
Maetani,C. 311,311
Maeyama,T. 309,310
Maggio,J.C. 547
Magherini,P.C. 203
Mallet,A.I. 188,208
Mania-Farnell,B. 185
Mankin,R.W. 421
Marfaing,P. 11,216
Marion-Poll,F. 218
Marks,L.E. 179
Martin,D.F. 222
Marui,T. 314
Masaki,H. 321
Maski,H. 307
Masson,C. 179,187,197, 208,213,220,220,227
Matsuki,Y. 320
Matsumoto,H. 309
Matsumoto,I. 305
Matsunaga,S. 309
Matsunaga,T. 311,311
Matsuo,R. 47,313,321
Matsushima,T. 324
Matsuzaki,N. 309
Matsuzaki,S. 320
Mattes,R. 180

Mattes,R.D. 673
Maury,V. 228
Mayer,M.S. 421
McClintock,T.S. 637,817
Mela,D.J. 131
Menco,B.Ph.M. 218
Mendoza,A.S. 219
Michel,W. 314
Mimura,Y. 305
Minor,A.V. 219,229
Miyamoto,T. 316,324
Miyaoka,Y. 327
Miyasaka,A. 325
Miyashita,Y. 781
Mize,S.J.S. 371,621
Mochizuki,K. 310
Mollicone,R. 198
Moore,P.A. 829
Morel,R. 195
Mori,M. 307,307,321
Morimatsu,F. 306
Morita,H. 322
Morita,M. 305
Mouly,A.M. 219
Mueller,K. 180
Müller,P.M. 181
Munro,Z.M. 201
Muramoto,K. 312,312,321
Murata,T. 320
Muroya,J. 309
Mustaparta,H. 196,202,435

Nagai,T. 315,324
Nagakura,A. 781
Nagata,K. 326
Naguro,T. 649
Naim,M. 226
Nakahara,S. 315
Nakajo,S. 325
Nakamura,K. 312
Nakamura,M. 316
Nakamura,Y. 325
Nakano,Y. 305
Nakaya,K. 325
Nakayama,Y. 304,304
Nell,A.E. 201
Nishino,H. 313
Nixon,A. 188
Noble,A.C. 203
Nomura,N. 323
Norgren,R. 55
Notake,N. 311,311
Nowlis,G.H. 451

O'Connell,R.J. 199,293
O'Mahony,M. 191
Oda,H. 305
Ogawa,K. 309
Ogino,H. 311,311
Ohki,M. 306
Ohnishi,S. 305
Ohno,F. 309
Ohsawa,I. 308
Ohtahara,A. 326
Ohyama,M. 309
Okabe,E. 305
Okada,Y. 316,324
Okai,H. 320
Olsson,M.J. 183,198
Ono,T. 312,312,312,321
Onoda,N. 313
Oomura,Y. 313
Oriol,R. 198
Otomo,M.I. 307
Ozaki,M. 319

Pace,U. 226
Pager,J. 192
Palen,J. 467
Panhuber,H. 537
Patte,F. 11,191
Payne,G.A. 195
Perret,M. 224
Persaud,K.C. 188
Pham-Delegue,M.H. 213, 220,220,227
Pietra,P. 203
Plattig,K.-H. 310
Plossl,C. 213
Ploye,H. 193
Polak,E. 221
Pourtier,L. 221,225
Powers,J.J. 211
Price,I.R. 149
Punter,P.H. 205

Rabin,M.D. 479
Rathbone,E. 203,204
Ravel,N. 192
Rawbone,R.G. 222
Reddy,P.A. 137
Rehnberg,B.G. 663
Rennie,P.J. 208
Reutter,K. 192
Ribes,C. 222
Rittschof,D. 121,137
Rivard,G. 273
Robinson,C.J. 222,224
Roelofs,W.L. 393
Roger,B. 220
Rohse,H. 175
Roozen,J.P. 204
Rospars,J.P. 223
Rottman,T.R. 525
Rouault,J. 191,223
Royet,J.P. 193
Rozin,P. 771
Rulli,R.D. 176
Rumbo,E.R. 361
Ruparelia,B.A. 209
Russell,Y. 223,229

Saito,S. 305,311
Sakaguchi,T. 327
Sako,M. 309
Salovaara,H. 211
Sano,T. 325
Sasaki,S. 781
Sasner,J.M. 587
Sata,O. 316,847
Sato,T. 316,316, 318,324,847
Satoh,Y. 308
Saucier,D. 224
Savoy,L. 209
Scalera,G. 203
Schiffman,S.S. 193
Schilling,A. 224
Schütte,K. 817
Scott,T.R. 313
Secor,H.V. 467
Seeman,J.I. 467
Seki,T. 320
Serviere,J. 224
Shamil,S. 204
Shenker,J. 771
Shepherd,R. 186,194
Shiba,Y. 605
Shibata,Y. 308
Shibuya,T. 322,323
Shimamura,A. 315
Shinholser,K. 211
Shiraishi,S. 308
Shirley,S. 221
Shirley,S.G. 205,222,224
Shirokura,M. 305
Shu,T. 312,312
Siaudeau,E. 222
Sicard,G. 221,225
Simmen,B. 225
Simon,S.A. 193
Simons,D.A. 137
Singer,A.G. 565
Skinner,M.S. 225
Sleight,D. 194
Smith,D.V. 103,231
Smith,K. 186,194
Someya,J. 320

Souchier,C. 193
Spielman,A.I. 841
Stahl,B. 226
Steinbrecht,R.A. 216,226
Stevens,D.A. 293
Stevens,J.C. 633
Striem,B.J. 226
Sugano,H. 303
Sugimoto,K. 318
Sun,X.J. 187
Suzuki,N. 318

Tabuchi,E. 312,312,321
Tada,M. 320
Takagi,S.F. 25
Takahashi,N. 325
Takashima,Y. 303,321
Takayama,C. 781
Takemoto,I. 311,311
Takeshita,S. 309
Talou,T. 227
Tamaki,M. 327
Tamura,M. 320
Tamura,R. 312
Tanaka,H. 305
Tanaka,M. 306
Tanida,M. 304,304
Tao,J. 212
Tchicaya,T. 185
Te-Ming,C. 184
Teeter,J.H. 176,184,318
Theerasilp,S. 319,325
Thiery,D. 227
Tobin,T. 218
Toko,K. 320
Tomita,H. 306,306
Tonoike,M. 311,311,318
Tonosaki,K. 319
Torii,K. 312,312,321
Torii,S. 303
Torii,T. 307,307
Tourila,H. 228
Toyoshima,K. 315,324
Trapido-Rosenthal,H.G. 176
Travers,S.P. 55
Trotier,D. 611
Tsuchiya,T. 304,304
Tsutsui,Y. 310

Uchida,C. 309
Uenoyama,S. 304,304

Van der Haagen,M.M. 205
van der Wel,H. 75,210,211
van Gemert,L. 205
Van Houten,J.L. 587
Van Toller,S. 194,214
Vayssettes-Courchay,C. 186
Vigouroux,M. 202
Vogel,W.O.P. 192
Voigt,R. 228
Voigt,T. 182

Wakisaka,S. 313
Walker,D.G. 649
Watkins,W.J. 188,208
Weiler,E. 182
Wellen,D.G. 633
Whitney,G. 547
Wieser,H. 175
Wiggins,L.L. 103
Williams,A.A. 195
Winneke,G. 195
Winter,B. 181
Wood,M. 206,212
Wood,M.A. 229
Wysocki,L. 841

Yamada,K. 310
Yamafuji,K. 320,320
Yamagishi,M. 305
Yamaguchi,S. 181,309
Yamamoto,T. 47,313,321
Yamamura,M. 305,311
Yamashita,S. 309,314,317
Yasuda,M. 306
Yeung,D. 149
Yonehara,N. 313
Yonezawa,H. 317
Yoshida,M. 308,310,314
Yoshida,T. 311
Yoshii,K. 324,325
Yoshimura,S. 311,311

Zehavi,U. 226
Zeng,C. 317
Ziegelberger,G. 182
Zinkevich,E.P. 229

Subject index

Volume 14

Adaptation,
male moth, pheromone-mediated, antennal neurons 411
NaCl gustatory sensitivity 633
Amiloride,
effects, human salt taste 793
Amino acids,
apparent specific volume, taste, comparison 249
Antagonism,
gymnemic acids, mechanisms 859
Antennal neurons,
moth, neurophysiological response, pulsed/continuous stimulation, pheromone receptor 421
pheromone-mediated, male moth, adaptation 411
Aphrodisin,
activity conspecific/heterospecific related proteins, hamster 565
Arginine,
structure/activity, taste pathway, channel catfish 805
Aversive conditioning,
odorants mixtures, olfactory response, spiny lobster 503

Binary mixtures,
perception, pungent odorants 163
receptor model, fructose/glucose sweetness 597
sweeteners interaction, assessment 621
Bovine,
estrous pheromones, body fluids, behavioral assay 273

cAMP,
olfactory receptor cells, transduction, lobster 817
Channel catfish,
arginine taste pathway, structure/activity 805
Chorda tympani,
hamster, asymmetrical neural cross-adaption, salts 663
Cluster analysis,
fragrance categories, ambiguous odor 349
Competitive inhibition,
gymnemic acids, specificity 853
***Corydoras aeneus*,**
nerve fibers/taste buds trypsin treatment 605

Drinking water,
taste comparisons, Australian 149

EOG generation,
frog, divalent cations 611
Estrous pheromones,
bovine, body fluids, behavioral assay 273

Feeding behaviour,
hexoses, stimulation fiddler crabs 121
Fiddler crabs,
hexoses stimulation, feeding behaviour 121
Folate,
Paramecium chemoreceptor 587
Frog,
divalent cations, EOG generation 611
taste response, glossopharyngeal nerve 487
Fructose,
binary mixtures, receptor model, sweetness 597
Fungiform taste buds,
transection chorda tympani/chorda-lingual nerve, effects 335

Generalization,
learned taste aversion, rabbit, gustatory stimuli 103
Glossopharyngeal nerve,
frog, taste response 487
Glucose,
binary mixtures, receptor model, sweetness 597
Gustatory threshold,
assessment, preference tests 547
Gymnemic acids,
antagonism mechanisms 859
specificity, competitive inhibition 853

Hamster,
aphrodisin related activity, conspecific/heterospecific proteins 565
asymmetrical neural cross-adaption, chorda tympani, salts 663
learned aversion, taste quality 451
topographic taste response 231
Hexoses,
feeding behaviour, stimulation, fiddler crabs 121
Human,
performance effects, ambient odor 525
quantitative/qualitative odors responses, differences 293
Hypothalamic paraventricular nucleus,
vasopressinergic neurons, water response, rat pharyngolaryngeal region 327

Hypothyroidism,
sensory perception, effects 537

Inhibition,
olfactory mixtures, power law exponent, synergy 11
Irritants,
hot/cold, stimulation locus, specificity 771
Irritation,
salt, oral 259

Learned aversion,
hamster, taste quality 451
Lobster,
cAMP transduction, olfactory receptor cells 817
olfactory receptor cells, mixture suppression, transduction 637

Masera's organ,
postnatal development, rat 649
Mice,
taste tissue collection 841
Microelectrochemical electrodes,
spatio–temporal analysis, aquatic chemical signals, high resolution 839
Mixture suppression,
lobster olfactory receptor cells 637
Moth,
antennal neurons, pheromone receptor, stimulation neurophysiological response 421
male response specificity, multicomponent pheromone 393
pheromone chemical characterization/ biosynthetic intermediates 383
pheromone discrimination, olfactory system 435
pheromone systems, behaviour, biochemistry, neurophysiology 379
pheromone-mediated adaptation, antennal neurons, male 411
Mud crab,
pumping pheromone peptide analogs, structure–function studies 137
Multidimensional scaling,
fragrance categories, ambiguous odor 349

NaCl,
adaptation, young/elderly gustatory sensitivity 633
saltiness, total intensity, sucrose mixtures, taste 81

Odor,
ambient, human performance effects 525
multidimensional scaling/cluster analysis, ambiguous fragrance categories 349
quantitative/qualitative human responses, differences 293
strawberry, enhanced sweetness, red color, sucrose 371
Odor intensity,
correlations with odorants structural properties 281
Odorants,
aversive conditioning, mixtures, olfactory response, spiny lobster 503
odor intensity—correlations with structural properties 281
Olfactometer,
standardized in Japan 25
Olfactory functioning,
comparisons, UPSIT/CCCRC 479

Paramecium,
folate chemoreceptor 587
Pattern recognition,
structure–taste correlation, substituted β-ethylbenzenes 781
Pentadin,
isolation, characterization, *Pentadiplandra brazzeana* Baillon, sweet-tasting principle 75
***Pentadiplandra brazzeana*, Baillon,**
sweet-tasting principle/pentadin, isolation, characterization 75
Perception,
pungent odorants, binary mixtures 163
sensory, hypothyroidism effects 537
Phenylthiocarbamide,
taste thresholds, Japanese 847
Pheromone,
male moth, mediated adaptation antennal neurons 411
moth systems, behaviour, biochemistry, neurophysiology 379
moth, antennal neurons receptor, neurophysiological response, pulsed/continuous stimulation 421
moth, chemical characterization, biosynthetic intermediates 383
moth, discrimination, olfactory system 435
mud crab, peptide analogs, structure–function studies 137
receptors recorded nerve impulses 361
response specificity, multicomponent, male moth 393
Piriform cortex,
rat, stimulation response, optical recordings 577
Power law exponent,
synergy/inhibition olfactory mixtures 11

Rat,
effects transection chorda tympani/chorda-lingual nerve, fungiform taste buds 335
Masera's organ postnatal development 649
optical recordings piriform cortex response, stimulation 577
response vasopressinergic neurons discharge, hypothalamic paraventricular nucleus,
pharyngolaryngeal region 327
taste tissue collection 841
Receptors,
pheromone, recorded nerve impulses 361

Salt,
amiloride effects, human taste 793
oral irritation 259
taste, sensitivity 673
Solitary tract nucleus,
time course, gustatory response, application site, stimulus 55
Spatio–temporal analysis,
aquatic chemical signals, high resolution microelectrochemical electrodes 839
Spiny lobster,
aversive conditioning, olfactory response, odorants mixtures 503
Steric hindrance,
substituted benzenes/pyridines, perceptual similarity 467
Stimulation,
pulsed/continuous, moth pheromone receptor neurophysiological response 421
rat, piriform cortex response, optical recordings 577
salivary secretion, Umami substances, human 47
Stimulation locus,
hot/cold, irritants, specificity 771
Sucrose,
enhanced sweetness, strawberry odor, red color 371
sweetness, total intensity, NaCl mixtures, taste 81
Sweeteners,
binary mixtures, interaction, assessment 621
Sweetness,
fructose, glucose, receptor model, binary mixtures 597
Synergy,
olfactory mixtures, inhibition, power law exponent 11

Taste,
amino acids, comparison, apparent specific volume 249
comparisons, Australian drinking water 149
generalization, learned aversion, rabbit, gustatory stimuli 103
human taste/salivary stimulation/secretion 47
quality, learned aversion, hamster 451
response, frog glossopharyngeal nerve 487
salt sensitivity 673
salt, human, amiloride effects 793
sucrose, NaCl, mixtures, sweetness, saltiness, total intensity 81
topographic response, hamster 231
Taste thresholds,
Japanese, phenylthiocarbamide 847
Taste tissue,
collection, rat, mice 841
Thiourea,
taster/nontaster, bitter taste intensity 131
Transduction,
lobster olfactory receptor cells 637

Umami substances,
human taste stimulation, salivary secretion 47

Water,
rat pharyngolaryngeal region, vasopressinergic neurons response 327